UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,791	09/10/2003	Timo Kivinen	KOLS.049PA	5622

7590 03/31/2008

Hollingsworth & Funk, LLC
Suite 125
8009 34th Avenue South
Minneapolis, MN 55425

EXAMINER	
PHAN, HUY Q	
ART UNIT	PAPER NUMBER
2617	
MAIL DATE	DELIVERY MODE
03/31/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/659,791	KIVINEN, TIMO	
	Examiner	Art Unit	
	HUY Q. PHAN	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01/28/2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14 and 16-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 16-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This Office Action is in response to Amendment filed on date: 01/28/2008.

Claims 1-14 and 16-22 are still pending.

Response to Arguments

2. A) Applicant's arguments, with respect to the 112 rejection, have been fully considered but they are not persuasive.

Applicant argued that the claims 7 and 21 are not a "single means" claim or specifically that "Claim 21 is not written in "means plus function" format and includes multiple properties". The examiner respectfully disagrees with the applicant's argument. MPEP (2181) states that "printing means" and "means for printing" which would have the same connotations. Ex parte Klumb, 159 USPQ 694 (Bd. App. 1967). Therefore, "a network element" of claim 21 is implied as "a single mean"; even though claim 21 is not written in "means plus function" format and includes multiple properties". In addition to applicant's specification which clearly discloses that there are different network elements ("at least some network element(s)") for performing the different tasks (page 6). Since, claim 7 specifically recites one network element and claim 21 specifically recites a network element, which does not appear in combination with another elements; therefore, claims 7 and 21 are a single means claim.

B) Applicant's arguments, with respect to the 102 rejection, have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7 and 21 are rejected under 35 U.S.C. 112 because the claim is a single means claim. MPEP (2164.08(a)) states:

> A single means claim, i.e., where a means recitation does not appear in combination with another recited element of means, is subject to an undue breadth rejection under 35 U.S.C. 112, first paragraph. *In re Hyatt*, 708 F.2d 712, 714-715, 218 USPQ 195, 197 (Fed. Cir. 1983) (A single means claim which covered every conceivable means for achieving the stated purpose was held nonenabling for the scope of the claim because the specification disclosed at most only those means known to the inventor.). When claims depend on a recited property, a fact situation comparable to *Hyatt* is possible, where the claim covers every conceivable structure (means) for achieving the stated property (result) while the specification discloses at most only those known to the inventor.

Since, claims 7 and 21 specifically recite a network element, which does not appear in combination with another elements; therefore, claim 21 is a single means claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-14 and 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giniger (US-6,985,742; previously cited) in view of Ozturk (US 2003/0096620; newly cited).

Regarding claim 1, Giniger discloses a method for determining grid-specific location information (fig. 2) to be used in a mobile communication network (fig. 1), the method comprising

encrypting the grid-specific location information on at least one grid of the mobile communication network to be used in the particular mobile communication network (col. 6, lines 24-31) by using a predetermined encryption algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66),

determining substantially the geographical coverage area of the grid (fig. 2, and col. 8, lines 62-66), and

storing the encrypted (col. 19, lines 4-10), grid-specific location information and the geographical coverage area information on the grid in a database (fig. 1, 107) such that the two aspects of the information are interlinked (col. 6, lines 6-12).

But, Giniger does not particularly show a grid being a cell. However in analogous art, Ozturk teach a grid being a cell (fig. 2 and [0010]). Since, Giniger and Ozturk are related to the cellular telephone system or more specifically that they both are concerned with coverage area-specific location information for determining the location of the mobile station; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Giniger as taught by

Ozturk for purpose of offering the system of using the available information as cell-specific location information (Ozturk's "invention uses cell location information available in the radio network to determine an area where the mobile radio is located"; see [0006]) in order to save the cost and provide "a more reliable and accurate way to determine the position of a mobile radio" (see [0005]).

Regarding claim 2, Giniger discloses the method of claim 1, further comprising establishing a data transfer connection from a service provider (fig. 1, 105) external to the mobile communication network to the database (107) in order to use the encrypted, cell-specific location information and the geographical coverage area information on at least one cell in cell positioning services (fig. 2; also see col. 6).

Regarding claim 3, Giniger discloses the method of claim 1, further comprising encrypting, in a mobile station connected to the mobile communication network, the cell-specific location information on the mobile station to be used in the mobile communication network by using the predetermined encryption algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66).

Regarding claim 4, Giniger discloses the method of claim 3, further comprising transmitting a cell positioning service request from the mobile station to the service provider (col. 8, lines 51-57), the cell positioning service request including the encrypted

(col. 6, lines 24-31), cell-specific location information on at least one mobile station, in response to the request, retrieving from the database through the data transfer connection the geographical coverage area information corresponding with the encrypted (col. 6, lines 6-12), cell-specific location information on at least one mobile station in the request (col. 8, lines 51-57), and transmitting a cell positioning service message to the mobile station (col. 6, lines 42-48), the cell positioning service message including at least the geographical coverage area information (col. 9, lines 1-6).

Regarding claim 5, Giniger discloses the method of claim 4, further comprising transmitting the geographical coverage area information in the cell positioning service message as graphic map information (col. 3, lines 24-37 or col. 5, lines 40-43).

Regarding claim 6, Giniger discloses the method of claim 1, further comprising storing the encrypted, cell-specific location information and the geographical coverage area information on the cells of several different mobile communication networks (fig. 1; GPS (109) and cellular network (101)) in the database such that the two aspects of the information are interlinked (col. 6, lines 6-12).

Regarding claim 7, Giniger discloses a system for determining grid-specific location information to be used in a mobile communication network, wherein

at least one network element of the mobile communication network is configured to encrypt the grid-specific location information (col. 6, lines 24-31) on at least one grid

(fig. 2) to be used in the mobile communication network by using a predetermined encryption algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66),

at least one network element of the mobile communication network is configured to determine substantially the geographical coverage area of the grid (fig. 2, and col. 8, lines 62-66), and

the encrypted (col. 6, lines 24-31), grid-specific location information and the geographical coverage area information on the grid are configured to be stored in a database (fig. 1, 107) such that the two aspects of the information are interlinked (col. 6, lines 6-12).

But, Giniger does not particularly show a grid being a cell. However in analogous art, Ozturk teach a grid being a cell (fig. 2 and [0010]). Since, Giniger and Ozturk are related to the cellular telephone system or more specifically that they both are concerned with coverage area-specific location information for determining the location of the mobile station; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Giniger as taught by Ozturk for purpose of offering the system of using the available information as cell-specific location information (Ozturk's "invention uses cell location information available in the radio network to determine an area where the mobile radio is located"; see [0006]) in order to save the cost and provide "a more reliable and accurate way to determine the position of a mobile radio" (see [0005]).

Regarding claim 8, Giniger further discloses the system of claim 7, wherein a connection (col. 6, lines 24-31) is provided from a service provider (fig. 1, 105) external to the mobile communication network to the database in order to use the encrypted, cell-specific location information and the geographical coverage area information on at least one cell in cell positioning services (col. 6, lines 6-12).

Regarding claim 9, Giniger further discloses the system of claim 7, wherein a mobile station (fig. 1, 103) connected to the mobile communication network is configured to encrypt the cell-specific location information on the mobile station to be used in the mobile communication network by using the predetermined encryption algorithm (col. 6, lines 24-31).

Regarding claim 10, Giniger further discloses the system of claim 9, wherein the mobile station is configured to transmit a cell positioning service request to the service provider (col. 8, lines 51-57), the cell positioning service request including the encrypted (col. 6, lines 24-31), cell-specific location information on at least one mobile station (fig. 2), in response to the request, the service provider is configured to retrieve from the database the geographical coverage area information corresponding with the encrypted (col. 6, lines 6-12), cell-specific location information on at least one mobile station in the request, and to transmit a cell positioning service message to the mobile station (col. 6, lines 6-12), the cell positioning service message including at least the geographical coverage area information (col. 9, lines 1-6).

Regarding claim 11, Giniger further discloses the system of claim 10, wherein the service provider is configured to transmit the geographical coverage area information in the cell positioning service message as graphic map information (col. 3, lines 24-37 or col. 5, lines 40-43).

Regarding claim 12, Giniger further discloses the system of claim 10, wherein the cell positioning service message further includes at least some of the following information:

location information on at least one other mobile station

location information on at least one service determined in the service request (col. 5, lines 7-9)

suggested route to a target destination determined in the service request ("travelers" of col. 5, line 49 and "routing guidance" of col. 3, lines 24-67)

estimated length of distance to be travelled and time used by the mobile station on alleged route

information on a cell-specific service (col. 5, lines 44-51).

Regarding claim 13, Giniger further discloses the system of claim 7, wherein the encrypted, cell-specific location information and the geographical coverage area information on the cells of several different mobile communication networks (fig. 1; GPS (109) and cellular network (101)) are configured to be stored in the database such that

the two aspects of the information are interlinked (col. 6, lines 6-12).

Regarding claim 14, Giniger discloses a mobile station (fig. 1, 103), which is configured to

establish a connection to a mobile communication network (col. 6, lines 24-31),

encrypt the grid-specific location information on the mobile station (col. 6, lines 24-31) to be used in the mobile communication network by using a predetermined encryption algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66)

transmit a grid positioning service request to a service provider providing a grid positioning service (col. 8, lines 51-57), the grid positioning service request including the encrypted, grid-specific location information on at least one mobile station (col. 6, lines 24-31), and

receive a grid positioning service message from the service provider (col. 6, lines 31-36), the grid positioning service message including at least the geographical coverage area information (fig. 2, and col. 8, lines 62-66) corresponding with the encrypted (col. 6, lines 31-36), grid-specific location information (col. 9, lines 1-6, also see col. 5).

But, Giniger does not particularly show a grid being a cell. However in analogous art, Ozturk teach a grid being a cell (fig. 2 and [0010]). Since, Giniger and Ozturk are related to the cellular telephone system or more specifically that they both are concerned with coverage area-specific location information for determining the location

of the mobile station; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Giniger as taught by Ozturk for purpose of offering the system of using the available information as cell-specific location information (Ozturk's "invention uses cell location information available in the radio network to determine an area where the mobile radio is located"; see [0006]) in order to save the cost and provide "a more reliable and accurate way to determine the position of a mobile radio" (see [0005]).

Regarding claim 16, Giniger further discloses the mobile station of claim 14, which is further configured to present the geographical coverage area information in the cell positioning service message as graphic map information (col. 3, lines 24-37 or col. 5, lines 40-43).

Regarding claim 17, Giniger further discloses the mobile station of claim 14, which is further configured to receive from the service provider the cell positioning service message including at least one aspect of the encrypted (col. 6, lines 31-36), cell-specific location information and the geographical coverage area information linked thereto (col. 6, lines 6-12), determine the encrypted, cell-specific location information corresponding with its location (col. 6, lines 24-31), and update its current location into the geographical coverage area information in the cell positioning service message (col. 6, lines 60-63).

Regarding claim 18, Giniger further discloses the mobile station of claim 14, which is further configured to determine the encrypted, cell-specific location information corresponding with its location, in response to a change in location (col. 6, lines 60-63), store successive encrypted, cell-specific location information, transmit a cell positioning service request to a service provider providing a cell positioning service (col. 8, lines 51-57), the cell positioning service request including the encrypted, cell-specific location information stored in memory, and receive a cell positioning service message from the service provider (col. 6, lines 6-12), the cell positioning service message including at least the geographical coverage area information corresponding with the encrypted, cell-specific location information stored in memory (col. 9, lines 1-6).

Regarding claim 19, Giniger further discloses the mobile station of claim 14, including computer program means (since, the "mobile communication device comprises a laptop computer" see claim 12) for encoding cell-specific location information on mobile stations to be used in a mobile communication network into encrypted cell identities (col. 6, lines 24-31) according to a predetermined algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66), and computer program means for decoding the encrypted cell identities into cell-specific location information on a mobile station (col. 6, lines 31-36) to be used in the mobile communication network according to a predetermined algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66).

Regarding claim 20, Giniger further discloses the mobile station of claim 19, including computer program means (since, the "mobile communication device comprises a laptop computer" see claim 12) for generating a cell positioning service request to a service provider providing a cell positioning service (col. 8, lines 51-57), the cell positioning service request including the encrypted cell identity of at least one mobile station (col. 6, lines 24-31).

Regarding claim 21, Giniger discloses a network element (fig. 1, 103 and/or 107) for a mobile communication network (fig. 1), wherein

the network element is configured to encrypt grid-specific location information (col. 6, lines 24-31) on at least one grid (fig. 1, A2) to be used in the mobile communication network by using a predetermined encryption algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66),

the network element is configured to determine substantially the geographical coverage area of the grid (fig. 2, and col. 8, lines 62-66), and

the network element is configured to store the encrypted, grid -specific location information and the geographical coverage area information on the grid in a database such that the two aspects of the information are interlinked (col. 6, lines 6-12).

But, Giniger does not particularly show a grid being a cell. However in analogous art, Ozturk teach a grid being a cell (fig. 2 and [0010]). Since, Giniger and Ozturk are

related to the cellular telephone system or more specifically that they both are concerned with coverage area-specific location information for determining the location of the mobile station; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Giniger as taught by Ozturk for purpose of offering the system of using the available information as cell-specific location information (Ozturk's "invention uses cell location information available in the radio network to determine an area where the mobile radio is located"; see [0006]) in order to save the cost and provide "a more reliable and accurate way to determine the position of a mobile radio" (see [0005]).

Regarding claim 22, Giniger discloses a unit for a mobile station (fig. 1, 103), the unit comprising:

a computer readable medium including a program executable by a computer (since, the "mobile communication device comprises a laptop computer" see claim 12) for encoding grid -specific location information (col. 6, lines 24-31) on at least one grid (fig. 1, A2) by using a predetermined encryption algorithm ("an encrypted form using a public key envelope... encrypted using the symmetric key" see col. 17, lines 47-66), and

for delivering the encrypted grid identities further to the actual application program of the grid positioning service (col. 8, lines 51-57 and col. 6, lines 24-31).

But, Giniger does not particularly show a grid being a cell. However in analogous art, Ozturk teach a grid being a cell (fig. 2 and [0010]). Since, Giniger and Ozturk are related to the cellular telephone system or more specifically that they both are

concerned with coverage area-specific location information for determining the location of the mobile station; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Giniger as taught by Ozturk for purpose of offering the system of using the available information as cell-specific location information (Ozturk's "invention uses cell location information available in the radio network to determine an area where the mobile radio is located"; see [0006]) in order to save the cost and provide "a more reliable and accurate way to determine the position of a mobile radio" (see [0005]).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tang discloses that "Base stations 1 through M include the base station in the cell containing grid location 5 (the serving cell) and the base station in each neighboring cell of the cell containing section location 5" (see specification).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUY Q. PHAN whose telephone number is 571-272-7924. The examiner can normally be reached on 8:30AM-7PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Huy Q Phan/
Primary Examiner, Art Unit 2617
Date: 03/25/2008